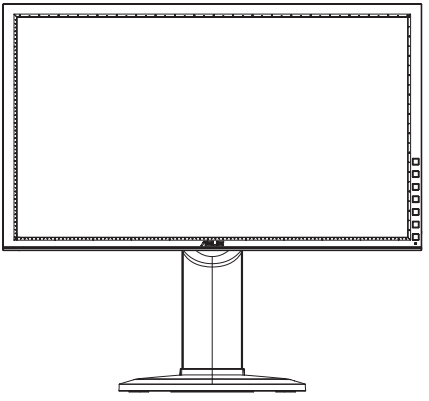
PB238TR Series
LCD Monitor

User Guide



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Notices

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

As an Energy Star® Partner, our company has determined that this product meets the Energy Star® guidelines for energy efficiency.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

Safety information

- Before setting up the monitor, carefully read all the documentation that came with the package.
- To prevent fire or shock hazard, never expose the monitor to rain or moisture.
- Never try to open the monitor cabinet. The dangerous high voltages inside the monitor may result in serious physical injury.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- Slots and openings on the back or top of the cabinet are provided for ventilation. Do not block these slots. Never place this product near or over a radiator or heat source unless proper ventilation is provided.
- The monitor should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
- Use the appropriate power plug which complies with your local power standard.
- Do not overload power strips and extention cords. Overloading can result in fire or electric shock.
- Avoid dust, humidity, and temperature extremes. Do not place the monitor in any area where it may become wet. Place the monitor on a stable surface.
- Unplug the unit during a lightning storm or if it will not be used for a long period of time. This will protect the monitor from damage due to power surges.
- Never push objects or spill liquid of any kind into the slots on the monitor cabinet.
- To ensure satisfactory operation, in case use at a PC then it should use the monitor only with computers which have appropriate configured receptacles marked between 100-240V AC.
- If you encounter technical problems with the monitor, contact a qualified service technician or your retailer.
- The wall socket shall be installed near the equipment and shall be easily accessible.

Care & Cleaning

- Before you lift or reposition your monitor, it is better to disconnect the cables and power cord. Follow the correct lifting techniques when positioning the monitor. When lifting or carrying the monitor, grasp the edges of the monitor. Do not lift the display by the stand or the cord.
- Cleaning. Turn your monitor off and unplug the power cord. Clean the monitor surface with a lint-free, non-abrasive cloth. Stubborn stains may be removed with a cloth dampened with mild cleaner.
- Avoid using a cleaner containing alcohol or acetone. Use a cleaner intended for use with the LED. Never spray cleaner directly on the screen, as it may drip inside the monitor and cause an electric shock.

The following symptoms are normal with the monitor:

- The screen may flicker during the initial use due to the nature of the fluorescent light. Turn off the Power Switch and turn it on again to make sure that the flicker disappears.
- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- When the same image is displayed for hours, an afterimage of the previous screen may remain after switching the image. The screen will recover slowly or you can turn off the Power Switch for hours.
- When the screen becomes black or flashes, or cannot work anymore, contact your dealer or service center to fix it. Do not repair the screen by yourself!

Conventions used in this guide

WARNING: Information to prevent injury to yourself when trying to complete a task.

CAUTION: Information to prevent damage to the components when trying to complete a task.

IMPORTANT: Information that you MUST follow to complete a task.

NOTE: Tips and additional information to aid in completing a task.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. **ASUS websites**

   The ASUS websites worldwide provide updated information on ASUS hardware and software products. Refer to **http://www.asus.com**

2. **Optional documentation**

   Your product package may include optional documentation that may have been added by your dealer. These documents are not part of the standard package.

1.1 Welcome!

Thank you for purchasing the ASUS® PB238TR Series LCD monitor!

The latest widescreen LCD monitor from ASUS provides a crisper, broader, and brighter display, plus a host of features that enhance your viewing experience.

With these features, you can enjoy the convenience and delightful visual experience that the PB238TR Series brings you!

1.2 Package contents

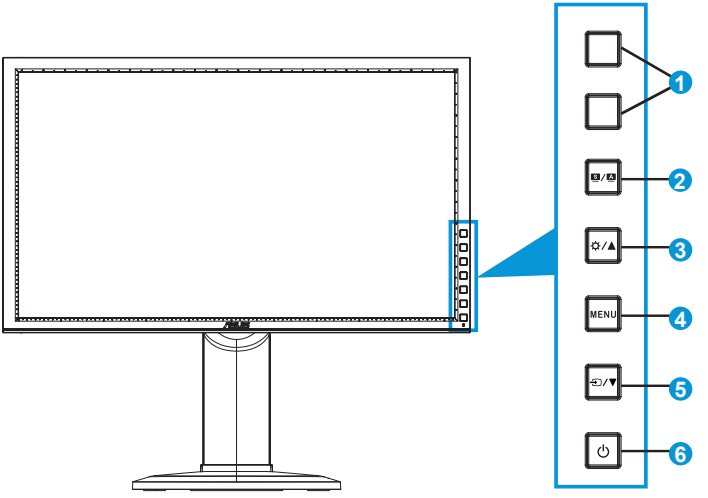
Check your PB238TR Series LCD monitor package for the following items:

- ✓ LCD monitor
- ✓ Power Cord
- ✓ VGA Cable
- ✓ DVI Cable
- ✓ USB Cable
- ✓ Cable Tie
- ✓ Audio Cable
- ✓ Quick Start Guide
- ✓ Warranty Card

If any of the above items is damaged or missing, contact your retailer immediately.

1.3 Monitor introduction

1.3.1 Front of the LCD monitor



1. Human sensor
   - Human sensor will detect user's presence in front of the monitor screen. It will automatically switch the monitor into power saving mode when it does not detect anyone in front of the monitor within the 50cm to 70cm effective range for longer than 60 seconds. When the user comes back, the power resumes automatically when it detects the user's presence.The default setting of Human sensor is "Medium". User can adjust the sensitivity based on his/her physique or the environment. User could also switch off Human sensor function.

   - Please do not put any object on the right side of the monitor to avoid any interference.
   - Please make sure that the Human Sensor is not placed anywhere higher than the user's shoulder.

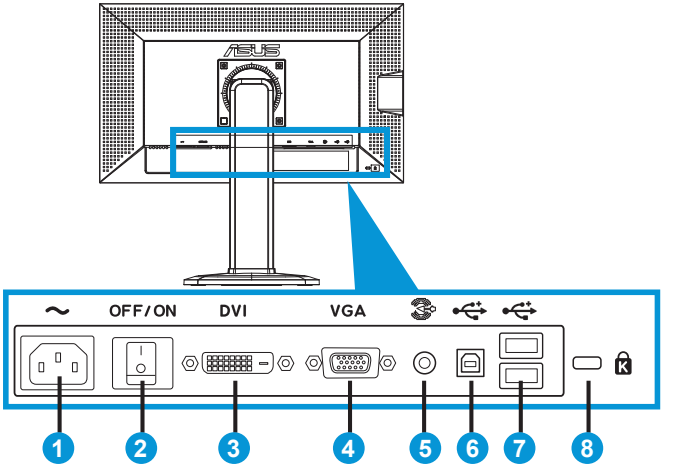
2. S / A Button:
   - Automatically adjust the image to its optimized position, clock, and phase by long pressing this button for 2-4 seconds (for VGA mode only).

- Use this hot key to switch from six video preset modes (Scenery Mode, Standard Mode, Theater Mode, Game Mode, Night View Mode, and sRGB Mode) with SPLENDID™ Video Intelligence Technology.
- Exit the OSD menu or go back to the previous menu as the OSD menu is active.

3. ☼ / ▲ Button:
   - Press this button to increase the value of the function selected or move right/up to the next function.
   - This is also a hot key for Brightness adjustment.
4. MENU Button:
   - Press this button to enter the OSD menu.
   - Press this button to enter/select the icon (function) highlighted while the OSD is activated.
5. ⏎ / ▼ Button:
   - Press this button to decrease the value of the function selected or move to the next function.
   - Use this hot key to switch from VGA, DVI, input signal .
6. ⏻ Power Button/Power Indicator:
   - Press this button to turn the monitor on/off.
   - The color definition of the power indicator is as the below table.

Status	Description
White	ON
Amber	Standby mode
OFF	OFF

1.3.2 Rear of the LCD monitor



Rear connectors

1. AC-IN port: This port connects the power cord.
2. Power switch: Press this switch to turn on/off power.
3. DVI port: This 24-pin port is for PC (Personal Computer) DVI-D digital signal connection.
4. VGA port: This 15-pin port is for PC VGA connection.
5. Audio Line-in Port:
6. USB upstream port: This port is for connection with a USB upstream cable.
7. USB downstream ports: These ports are for connection with USB devices, such as USB keyboard/mouse, USB flash drive, etc.
8. Kensington lock slot.

2.1 Detaching the arm/stand (for VESA wall mount)

The detachable stand of this monitor is specially designed for VESA wall mount.

To detach the arm/stand:

1. Disconnect power and signal cables. Carefully put the front of the monitor face down on a clean table.
2. Use a screwdriver to remove the four screws on the arm (Figure 1), and then detach the arm/stand from the monitor (Figure 2).

- We recommend that you cover the table surface with soft cloth to prevent damage to the monitor.
- Hold the stand of the monitor while removing the screws.

Figure 1

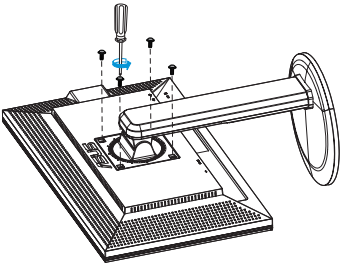
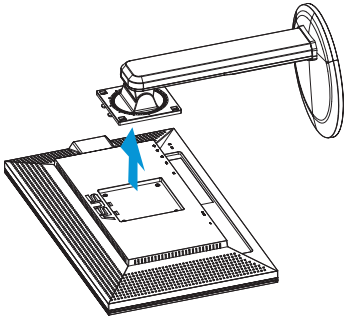


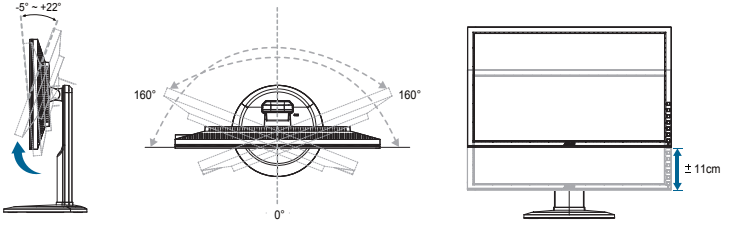
Figure 2



- The VESA wall mount kit (100 x 100 mm) is purchased separately.
- Use only the UL Listed Wall Mount Bracket with minimum weight/load 22.7 kg (Screw size: 4 x 10 mm).

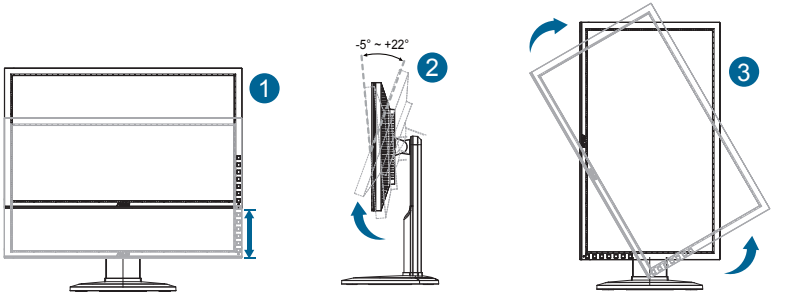
2.2 Adjusting the monitor

- For optimal viewing, we recommend that you look at the full face of the monitor, then adjust the monitor to the angle that is most comfortable for you.
- Hold the stand to prevent the monitor from falling when you change its angle.
- You can adjust the monitor's angle from +22˚ to -5˚ and it allows 160˚ swivel adjustment from either left or right. You can also adjust the monitor's height within +/- 11cm.



Pivoting the monitor

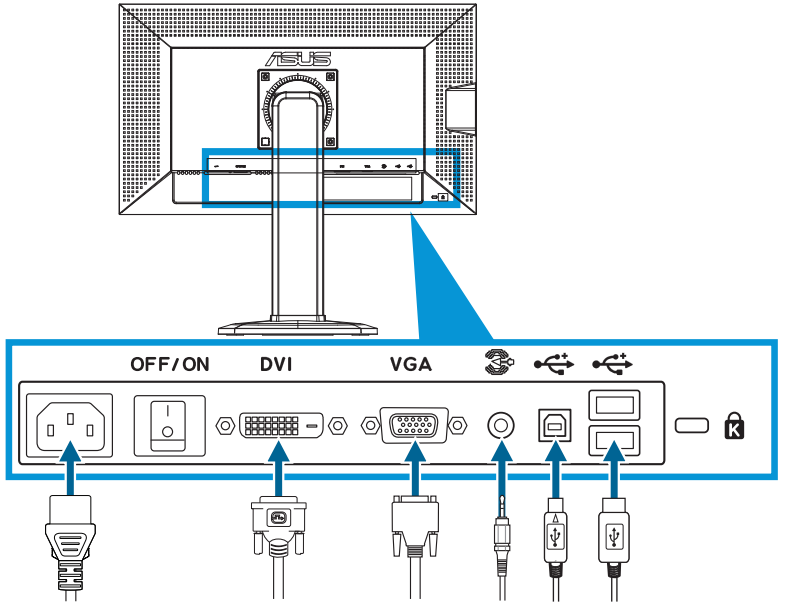
1. Lift the monitor to the highest position.
2. Tilt the monitor to its maximum angle.
3. Pivot the monitor clockwise to the angle you need.



It is normal that the monitor slightly shakes while you adjust the viewing angle.

2.3 Connecting the cables

Connect the cables as the following instructions:

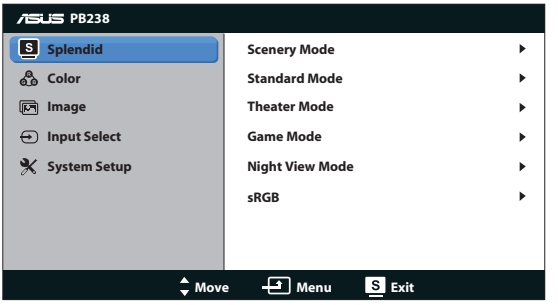


- **To connect the power cord**: Connect one end of the power cord securely to the monitor's AC input port, the other end to a power outlet.
- **To connect the VGA/DVI cable**:
  a. Plug one end of the VGA/DVI/ cable to the monitor's VGA/DVI jack.
  b. Connect the other end of the VGA/DVI cable to your computer's VGA/DVI jack.
  c. Tighten the two screws to secure the VGA/DVI connector.
- **To connect the audio cable**: Plug one end of the audio cable to the monitor's Audio Line-in Port. Connect the other end of the audio cable to your computer's audio Port.
- **To use the USB ports**: Plug the smaller end (type B) of the USB upstream cable to the monitor's USB upstream port, and the larger end (type A) to your computer's USB port.

When these cables are connected, you can choose the desired signal from the Input Select item in the OSD menu.

3.1 OSD (On-Screen Display) menu

3.1.1 How to reconfigure

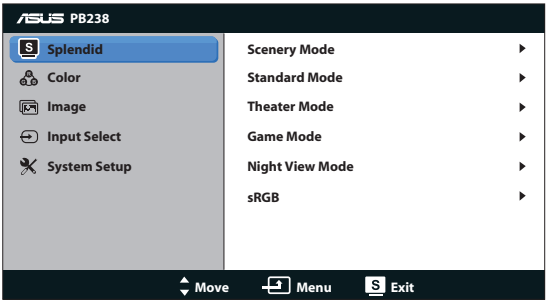


1. Press the MENU button to activate the OSD menu.
2. Press ▼ and ▲ to navigate through the functions. Highlight and activate the desired function by pressing the MENU button. If the function selected has a sub-menu, press ▼ and ▲ again to navigate through the sub-menu functions. Highlight and activate the desired sub-menu function by pressing the MENU button.
3. Press ▼ and ▲ to change the settings of the selected function.
4. To exit the OSD menu, press the S / A button. Repeat step 2 and step 3 to adjust any other function.

3.1.2 OSD Function Introduction

1. Splendid

This function contains six sub-functions that you can select for your preference. Each mode has the Reset selection, allowing you to maintain your setting or return to the preset mode.

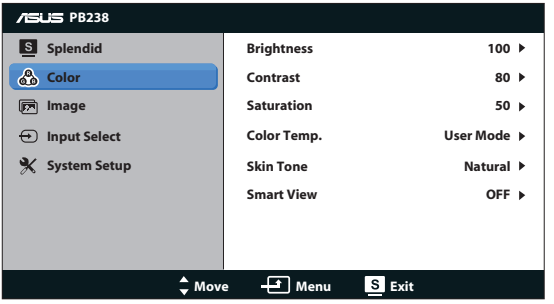


- **Scenery Mode**: This is the best choice for scenery photo displaying with SPLENDID™ Video Intelligence.
- **Standard Mode**: This is the best choice for document editing with SPLENDID™ Video Intelligence.
- **Theater Mode**: This is the best choice for movie watching with SPLENDID™ Video Intelligence.
- **Game Mode**: This is the best choice for game playing with SPLENDID™ Video Intelligence.
- **Night View Mode**: This is the best choice for playing dark-scene game or watching movie with SPLENDID™ Video Intelligence.
- **sRGB**: This is the best choice for viewing photos and graphics from PCs.

- In the **Standard Mode**, the **Saturation**, **Skin Tone**, **Sharpness**, and **ASCR** functions are not user-configurable.
- In the **sRGB**, the **Saturation**, **Color Temp.**, **Skin Tone**, **Sharpness**, and **ASCR** functions are not user-configurable.

2. Color

Select the image color you like from this function.

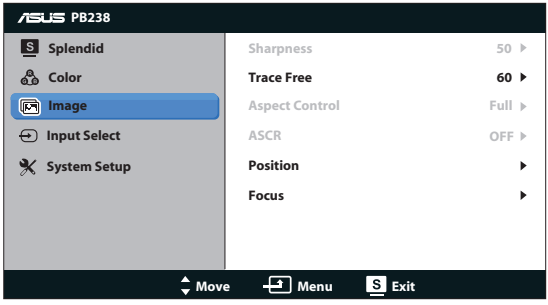


- **Brightness**: The adjusting range is from 0 to 100. The ☼/▲ button is also a hot key to activate this function.
- **Contrast**: The adjusting range is from 0 to 100.
- **Saturation**: The adjusting range is from 0 to 100.
- **Color Temp.**: Contain three preset color modes (Cool, Normal, Warm) and one User Mode.
- **Skin Tone**: Contain three color modes including Reddish, Natural, and Yellowish.
- **Smart View**: Enable a clearer visibility after tilted the screen.

In the User Mode, colors of R (Red), G (Green), and B (Blue) are userconfigurable; the adjusting range is from 0 ~ 100.

3. Image

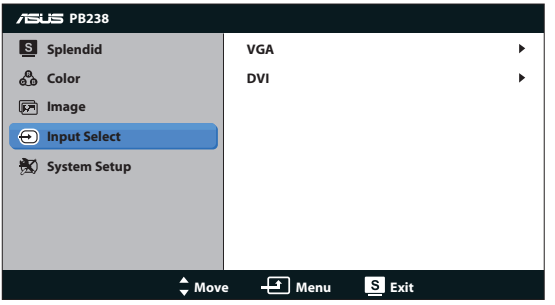
You can adjust the image Sharpness, Trace Free, Aspect Control, Position (VGA only), and Focus (VGA only) from this main function.



- **Sharpness**: Adjust the picture sharpness. The adjusting range is from 0 to 100.
- **Trace Free**: Speed up the response time by Over Drive technology. The adjusting range is from lower 0 to faster 100.
- **Aspect Control**: Adjust the aspect ratio to “Full”,“4:3”.
- **ASCR**: Select ON or OFF to enable or disable dynamic contrast ratio function.
- **Position**: Adjust the horizontal position (H-Position) and the vertical position (V-Position) of the image. The adjusting range is from 0 to 100 (only available for VGA input).
- **Focus**: Reduce Horizontal-line noise and Vertical-line noise of the image by adjusting (Phase) and (Clock) separately. The adjusting range is from 0 to 100 (only available for VGA input).

5. Input Select

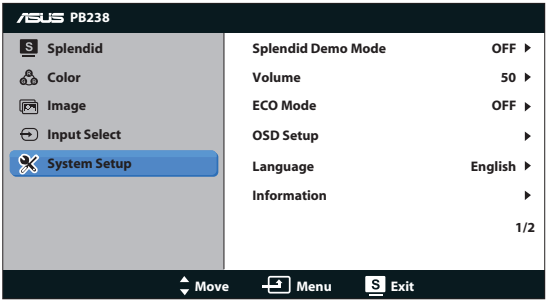
Select the input source from **VGA**, or **DVI**.



6. System Setup

Adjusts the system configuration.

page 1/2:



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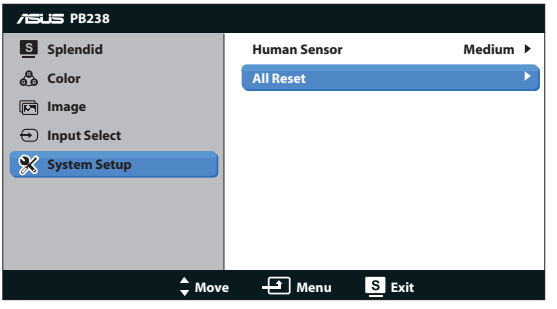

- **Splendid Demo Mode**: Activate the demo mode for the Splendid function.
- **Volume**: Activate the demo mode for the Splendid function.

- **ECO Mode**: Activate the ecology mode for power saving. (Some gray levels may not be distinguished if ECO is ON. Its brightness is lower than that when setting the Contrast Ratio to 100.)
- **OSD Setup**: Adjust the horizontal position (H-Position), vertical position (V-Position), OSD Timeout, DDC/CI, and Transparency of the OSD screen.
- **Language**: Select OSD language. The selections are English, French, German, Spanish, Italian, Dutch, Russian, Traditional Chinese, Simplified Chinese, and Japanese.
- **Information**: Display the monitor information.
- **Human Sensor**: Turn on/ off Human sensor function and adjust its sensitivity.
- **All Reset**: Set to “Yes” to revert all settings to the factory default mode.

3.2 Specifications

Model	PB238TR
Panel Size	23.0"W (58.42cm)
Max. Resolution	1920x1080
Brightness (Typ.)	250cd/m^2
Intrinsic Contrast Ratio (Typ.)	1000:1
Viewing Angle (CR=10)	178°(V) /178°(H)
Display Colors	16.7 M(6bit Hi FRC)
Response Time	6ms (Gray to Gray)
Satellite Speaker	2W x 2 stereo
Earphone Output	No
DVI input	DVI with HDCP
D-Sub input	Yes
Audio Line-in	Yes
Power ON Consumption	ON Mode: <50W*, Standby Mode: <0.5W, Off Mode: <0.5W
Note	*Based on Energy Star 6.0 standard
Tilt	-5° ~ +22°
VESA Wall Mounting	Yes (100mm x 100mm)
Phys. Dimension (WxHxD)	549x399x244.5mm
Box Dimension (WxHxD)	671x253x386mm
Net Weight (Esti.)	5.9kg
Gross Weight (Esti.)	8kg
Voltage Rating	AC 100~240V(Built-in)

3.3 Troubleshooting (FAQ)

Problem	Possible Solution
Power LED is not ON	• Press the ⏻ button to check if the monitor is in the ON mode. • Check if the power cord is properly connected to the monitor and the power outlet.
The power LED lights amber and there is no screen image	• Check if the monitor and the computer are in the ON mode. • Make sure the signal cable is properly connected the monitor and the computer. • Inspect the signal cable and make sure none of the pins are bent. • Connect the computer with another available monitor to check if the computer is properly working.
Screen image is too light or dark	• Adjust the Contrast and Brightness settings via OSD.
Screen image is not centered or sized properly	• Press the S / A button for two seconds to automatically adjust the image. • Adjust the H-Position or V-Position settings via OSD.
Screen image bounces or a wave pattern is present in the image	• Make sure the signal cable is properly connected to the monitor and the computer. • Move electrical devices that may cause electrical interference.
Screen image has color defects (white does not look white)	• Inspect the signal cable and make sure that none of the pins are bent. • Perform Reset via OSD. • Adjust the R/G/B color settings or select the Color Temperature via OSD.
Screen image is blurry or fuzzy	• Press the S / A button for two seconds to automatically adjust the image (for VGA mode only). • Adjust the Phase and Clock settings via OSD.
No sound or sound is low	• Ensure that the audio cable is properly connected to the monitor and the computer. • Adjust the volume settings of both your monitor and computer. • Ensure that the computer sound card driver is properly installed and activated.

3.4 Supported Timing List

PC Supported Primary Timing

Resolution	Refresh Rate	Horizontal Frequency
640x480	60Hz	31.469kHz
640x480	72Hz	37.861kHz
640x480	75Hz	37.5kHz
800x600	56Hz	35.156kHz
800x600	60Hz	37.879kHz
800x600	72Hz	48.077kHz
800x600	75Hz	46.875kHz
1024x768	60Hz	48.363kHz
1024x768	70Hz	56.476kHz
1024x768	75Hz	60.023kHz
1152x864	75Hz	67.5kHz
1280x960	60Hz	60kHz
1280x1024	60Hz	63.981kHz
1280x1024	75Hz	79.976kHz
1440x900	60Hz	55.935kHz
1440x900	75Hz	70.635kHz
1680x1050	60Hz	65.29kHz
1920x1080	60Hz	67.5kHz

IBM Modes, Factory Preset Timing(D-SUB, DVI-D, inputs)

Resolution	Refresh Rate	Horizontal Frequency
640x350	70Hz	31.469kHz
720x400	70Hz	31.469kHz

MAC Modes, Factory Preset Timing(D-SUB, DVI-D, inputs)

Resolution	Refresh Rate	Horizontal Frequency
640x480	67Hz	35kHz
832x624	75Hz	49.725kHz

VESA Modes, User Available Timing

Resolution	Refresh Rate	Horizontal Frequency
1280x720(RB)	60Hz	44.444kHz
1280x720	60Hz	44.772kHz
1280x720	75Hz	56.456kHz
1280x768(RB)	60Hz	47.396kHz
1280x800(RB)	60Hz	49.306kHz
1280x800	60Hz	49.702kHz
1280x800	75Hz	62.795kHz
1440x900(RB)	60Hz	55.469kHz
1440x900	75Hz	70.635kHz
1680x1050(RB)	60Hz	64.674kHz
1920x1080	60Hz	66.587kHz

*** The modes not listed in the above tables may not be supported. For optimal resolution, we recommend that you choose a mode listed in the above tables.**